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10/582,868	04/25/2007	Jean-Louis Viovy	121697	5953

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EXAMINER	
WHISENANT, ETHAN C	
ART UNIT	PAPER NUMBER
1634	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/582,868	VIOVY ET AL.	
	Examiner	Art Unit	
	Ethan Whisenant	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *30 March 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28 and 30-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *3-5,27,28,30,33-35,41,42,44 and 47* is/are allowed.

6)☒ Claim(s) *1,2,6-26,31,32,36-40,43,45,46 and 48-50* is/are rejected.

7)☒ Claim(s) *10-13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

NON-FINAL ACTION

1. The applicant's response (filed 17 FEB 06) to the Office Action has been entered. Following the entry of the claim amendment(s), **Claim(s) 1-28 and 30-50** is/are pending. Rejections and/or objections not reiterated from the previous office action are hereby withdrawn. The following rejections and/or objections are either newly applied or reiterated. They constitute the complete set presently being applied to the instant application.

35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that may form the basis for rejections set forth in this Office action:

> A person shall be entitled to a patent unless --
>
> **(a)** the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> **(b)** the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> **(e)** the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
> or
> **(e)** the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a)** A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligations under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

CLAIM REJECTIONS UNDER 35 USC § 102/103

5. Claim(s) 1-2, 6-9, 14-18, 25, 36, 37-40, 43 and 48-50 is/are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wallace et al. [US 5,639,611 (1997)].

Claim 1 is drawn to a method for assaying for the presence or absence of at least one mutation on a strand of nucleic acids in paired form comprising two required steps. To begin, said duplex suspected to include at least one mismatch is contacted, in a liquid medium with at least one compound able to undergo specific base pairing interaction with said mismatch, said compound(s) being used at a combined concentration of at least 10g/L in said liquid medium. Finally, assaying for said mismatch by an analytical method.

Wallace et al. teach a method for assaying for the presence or absence of at least one mutation on a strand of nucleic acids in paired form comprising the required steps. Wallace et al. teach allele-specific PCR (AS-PCR) to detect a mutation on a strand of nucleic acids in paired form. The assay involves the use of an analytical technique (i.e. agarose gel electrophoresis) to detect the mismatch (i.e. the mutation). Wallace et al. do not teach providing the compound(s) able to undergo specific base pairing interaction with said mismatch, at the concentration recited in Claim 1 (i.e. at least 10g/L). In Wallace, the dNTPs are provided at a combined concentration of 0.0194800g/L which is 19.48mg/L. However where the general conditions of a claim are

disclosed in the prior art, it is not inventive, in the absence of an unexpected result, to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Claim 2 is drawn to an embodiment of Claim 1 wherein said strands of nucleic acids paired in duplex form are two DNA strands which are in all or in part complementary.

Wallace et al. teach this embodiment in that the template nucleic acids (i.e. gDNA) is completely complementary. Note that the gDNA from heterozygotes comprise duplexes which are fully complementary and comprise a mutant allele and a normal allele [i.e. the gDNA from a heterozygote comprises a mismatch (i.e. a difference from the normal allele)].

Claim 6 is drawn to an embodiment of Claim 1 wherein said strand(s) of nucleic acids is a single stranded nucleic acid selected from a defined group which includes DNA and RNA.

Wallace et al. teach this embodiment in that the template nucleic acids (i.e. gDNA) is first denatured to a single stranded state at the beginning of the allele specific PCR. Furthermore, as evidenced by Snapir et al. it was known to analyze RNA for mutations using allele specific PCR, see ¶[0033].

Claim 7 is drawn to an embodiment of Claim 1 wherein the compound able to undergo a specific base pairing interaction includes at least two groups suitable for hydrogen bonding, in an orientation, polarity and spacing compatible with a creation of attractive interaction with at least one of bases A, T, G, C, and U.

Wallace et al. teach this limitation in that the dNTPs, provided during the AS-PCR step, includes at least two groups suitable for hydrogen bonding, in an orientation,

polarity and spacing compatible with a creation of attractive interaction with at least one of bases A, T, G, C, and U.

Claim 8 is drawn to an embodiment of Claim 1 wherein said compound is unable to interferer with polymerization reactions of nucleotides and/or to be incorporated into a newly polymerized DNA strand.

Wallace et al. teach this limitation in that the dNTPs, provided during the AS-PCR step, are unable to interferer with polymerization reactions of nucleotides.

Claim 9 is drawn to an embodiment of Claim 1 wherein said compound is selected from a defined group includes oligonucleotides, nucleosides, bases and mixtures thereof.

Wallace et al. teach this limitation in that the dNTPs, provided during the AS-PCR step, are mixtures of nucleosides.

Claim 14 is drawn to an embodiment of Claim 1 wherein said compound(s) is/are used at a concentration of 25g/L.

Wallace et al. do not teach providing the compound(s) able to undergo specific base pairing interaction with said mismatch, at concentration recited in Claim 14 (i.e. at least 25g/L). In Wallace the dNTPs are provided at a combined concentration of 0.0194800g/L which is 19.48mg/L. However where the general conditions of a claim are disclosed in the prior art, it is not inventive, in the absence of an unexpected result, to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Claim 15 is drawn to an embodiment of Claim 1 wherein said compound(s) has at least one substituent.

Wallace et al. teach this limitation in that each of the dNTPs comprise nitrogenous bases (i.e. substituents).

Claim 16 is drawn to an embodiment of Claim 15 wherein said substituent induces in said compound at least one change selected from a defined group which includes a change in charge.

Wallace et al. teach this limitation in that each of the dNTPs comprise nitrogenous bases (i.e. substituents) which depending on which base (AGCT or U) is present on the compound, the charge is different.

Claim 17 is drawn to an embodiment of Claim 1 wherein the mutation is a point mutation.

Wallace et al. teach this limitation.

Claim 18 is drawn to an embodiment of Claim 1 wherein said mutation is assayed by a hybridization.

Wallace et al. teach this limitation in that these authors teach AS-PCR (i.e. an assay involving hybridization) to detect the point mutation.

Claim 25 is drawn to a method for determining whether a patient is predisposed to a cancer or genetic disease or used in diagnosing a patient suspected of suffering from said cancer or disease or used in determining a prognosis of a patient diagnosed as having said cancer or disease said method comprising three required steps. To begin, a nucleic acid suspected to include at least one mismatch corresponding to the specific point mutation is obtained from the patient. Then, the nucleic acid in duplex form in a liquid medium is contacted with at least one compound able to undergo a specific base pairing interaction with the mismatch said at least one compound being used at a combined concentration of at least 10g/L. Finally, assaying for said mismatch by an analytical method to detect whether said mismatch is present wherein the presence of said mismatch indicates that the nucleic acid has a specific mutation known to be associated or putatively associated with the cancer or the genetic disease.

Wallace et al. teach a method for assaying for the presence or absence of at least one mutation on a strand of nucleic acids in paired form comprising the required steps recited in Claim 25. Wallace et al. teach allele-specific PCR to detect a mismatch (i.e. mutation) on a strand of nucleic acid in paired form. The assay of Wallace et al. involves the use of an analytical technique (i.e. agarose gel electrophoresis) to detect the mismatch (i.e. the mutation). Admittedly, Wallace et al. do not teach providing the compound(s) able to undergo specific base pairing interaction with said mismatch, at the concentration recited in Claim 25 (i.e. at least 10g/L) In Wallace the dNTPs are provided at 0.0194800g/L which is 19.48mg/L. However where the general conditions of a claim are disclosed in the prior art, it is not inventive, in the absence of an unexpected result, to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

As regards the limitation "a mismatch", Wallace et al. teach this limitation in that these authors teach detecting a mutation in the β-globin gene known to be associated with sickle cell disease. The mutation is a mismatch in that it does not match the normal allele.

Claim 36 is drawn to an embodiment of Claim 1 wherein the method is used in determining whether a patient is predisposed to a cancer or genetic disease known to be or putatively associated with a specific point mutation.

Wallace et al. teach this limitation in that these authors teach PCR (i.e. an assay involving hybridization) to detect a point mutation in the β-globin gene known to be associated with sickle cell disease.

Claim 38 is drawn to a method for assaying for the presence of a mismatch on nucleic acid in duplex form comprising two required steps. To begin, said nucleic acid is contacted with a compound able to undergo specific base pairing interaction at concentration of at least 10g/L. Finally, assaying for a mismatch in the nucleic acid to detect whether the mismatch is present. This embodiment also requires

that the nucleic acid comprise a nucleic sequence corresponding to a gene on which a point mutation is known to be associated with a disease or a predisposition to a disease. Also the compound able to undergo specific base pairing interaction comprises at least two groups suitable for hydrogen bonding , in an orientation, polarity and spacing compatible with a creation of attractive interaction with at least one of bases A, T, G,C and U.

Wallace et al. teach a method for assaying for the presence or absence of at least one mutation (i.e. a mismatch) on a strand of nucleic acid in paired form comprising the required steps set forth in Claim 38. Wallace et al. teach allele-specific PCR to detect mutation (i.e. mismatch) on a strand of nucleic acids in paired form. The assay involves the use of an analytical technique (i.e. agarose gel electrophoresis) to detect the mismatch (i.e. the mutation). Wallace et al. do not teach providing the compound(s) able to undergo specific base pairing interaction with said mismatch, at concentration recited in Claim 38 (i.e. at least 10g/L) In Wallace the dNTPs are provided at 0.0194800g/L which is 19.48mg/L. However where the general conditions of a claim are disclosed in the prior art, it is not inventive, in the absence of an unexpected result, to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

As regards the limitation "a mismatch", Wallace et al. teach this limitation in that these authors teach detecting a mutation in the β-globin gene known to be associated with sickle cell disease. The mutation is a mismatch in that it does not match the normal allele.

Claim 39 is drawn to a method for assaying for the presence of a mismatch on nucleic acid in duplex form comprising two required steps. To begin, said nucleic acid is contacted with a composition comprising a compound able to undergo specific base pairing interaction at concentration of at least 10g/L and a pair of DNA probes . Finally, assaying for a mismatch in the nucleic acid to detect whether the mismatch is present. This embodiment also requires that the compound able to undergo specific base pairing interaction comprises at least two groups suitable for

hydrogen bonding , in an orientation, polarity and spacing compatible with a creation of attractive interaction with at least one of bases A, T, G,C and U.

Wallace et al. teach a method for assaying for the presence or absence of at least one mutation (i.e. a mismatch) on a strand of nucleic acid in paired form comprising the required steps set forth in Claim 39. Wallace et al. teach allele-specific PCR to detect mutation (i.e. mismatch) on a strand of nucleic acids in paired form. The assay involves the use of an analytical technique (i.e. agarose gel electrophoresis) to detect the mismatch (i.e. the mutation). Wallace et al. do not teach providing the compound(s) able to undergo specific base pairing interaction with said mismatch, at concentration recited in Claim 39 (i.e. at least 10g/L) In Wallace the dNTPs are provided at 0.0194800g/L which is 19.48mg/L. However where the general conditions of a claim are disclosed in the prior art, it is not inventive, in the absence of an unexpected result, to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

As regards the limitation "a mismatch", Wallace et al. teach this limitation in that these authors teach detecting a mutation in the β-globin gene known to be associated with sickle cell disease. The mutation is a mismatch in that it does not match the normal allele.

CLAIM REJECTIONS UNDER 35 USC § 103

6. **Claim(s) 19-24** is/are rejected under 35 U.S.C. 103(a) as obvious over Wallace et al. [US 5,639,611 (1997)] as applied against Claim 1 above and further in view of Viovy et al. [US 2004/0084310].

Claim 19 is to an embodiment of Claim 1 wherein said mutation is assayed by electrophoretic analysis using a liquid separating medium.

Wallace et al. teach assaying for a mutation using electrophoretic analysis. Wallace et al. do not teach using a liquid separating medium. However, Viovy et al. do teach an electrophoretic analysis using a liquid separating medium. Therefore, absent an unexpected result it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to substitute the method of electrophoretic analysis of Viovy et al. which utilizes a liquid separating medium for the agarose gel electrophoresis method of Wallace et al. Please note that substitution of one well known method/reagent with known properties for a second well known method/reagent with well known properties would have been *prima facie* obvious to the ordinary artisan at the time of the invention in the absence of an unexpected result. As regards the motivation to make the substitution recited above, the motivation to combine arises from the expectation that the prior art elements will perform their expected functions to achieve their expected results when combined for their common known purpose. Support for making this obviousness rejection comes from the M.P.E.P. at 2144.07 and 2144.09.

7. **Claim(s) 26** is/are rejected under 35 U.S.C. 103(a) as obvious over Wallace et al. [US 5,639,611 (1997)] as applied against Claim 25 above and further in view of Murphy et al. [US 5,750,400 (1998)].

Claim 26 is drawn to an embodiment of Claim 1 wherein said point mutation is in a human breast cancer predisposition gene (BRCA).

Wallace et al. teach a method of detecting a point mutation in order to diagnose sickle cell disease which comprises all of the limitations of Claim 25 except Wallace et al. do not teach detecting mutations in a BRCA gene. However, as evidenced by at least Murphy et al. BRCA genes were known as was the detection of point mutations in BRCA genes in order to detect individuals at increased risk of breast cancer. Therefore, absent an unexpected result it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the assay of Wallace et al. wherein rather than detecting a point mutation in the β-globin gene, a point mutation in a BRCA gene is detected.. Please note that substitution of one well known method/reagent with known properties for a second well known method/reagent with well known properties would have been *prima facie* obvious to the ordinary artisan at the time of the invention in the absence of an unexpected result. As regards the motivation to make the substitution recited above, the motivation to combine arises from the expectation that the prior art elements will perform their expected functions to achieve their expected results when combined for their common known purpose. Support for making this obviousness rejection comes from the M.P.E.P. at 2144.07 and 2144.09.

8. Claim(s) 31 and 45 is/are rejected under 35 U.S.C. 103(a) as obvious over Perkin Elmer Cetus [GeneAmp™ DNA amplification kit (1988)] in view of Wallace et al. [US 5,639,611 (1997)].

Claim 31 is drawn to composition comprising a DNA fragment having a nucleic acid sequence that is hybridizable to a portion of a gene on which a point mutation(s) have been associated or putatively associated with a disease or an increase predisposition to a disease, and at least one compound able to undergo specific base pairing interaction at a concentration of at least 10g/L, wherein said compound able to undergo specific base pairing interaction includes at least two groups suitable for hydrogen bonding, in an orientation, polarity and spacing compatible with a creation of attractive interaction with at least one of bases A,T, G, C, and U.

Perkin Elmer Cetus teach a composition (i.e. a kit) comprising a DNA fragment and compound able to undergo specific base pairing interactions at a concentration of 10g/L (i.e. any of the dNTPs will have this capability). Also note that the dNTPs are provided in the kit as 10mM stock solutions, which means that the dNTPs are present at a combined concentration of approximately 19g/L, assuming an average molecular weight for each dNTP of 490. As regards the limitation that the DNA fragment have "a nucleic acid sequence hybridizable to a portion of a gene on which a point mutation(s) have been associated or putatively associated with a disease or an increase predisposition to a disease, the examiner readily admits that the control primers of the Perkin–Elmer Cetus kit fail to meet this limitation. The primers of the kit are directed toward bacteriophage lambda DNA. However, thousands of DNA sequences that are hybridizable to a portion of a gene on which a point mutation(s) have been associated or putatively associated with a disease or an increase predisposition to a disease were known at the time of the invention. For example, Wallace et al. teach primers which are able to amplify the a portion of the β-globin gene, a mutation in this gene is associated with sickle cell disease. Therefore absent an unexpected result it would have been *prima facie* obvious to the ordinary artisan at the time of the invention to substitute

the primers and template DNA of Wallace et al. for the primers and template of the Perkin-Elmer Cetus kit. Please note that substitution of one well known method/reagent with known properties for a second well known method/reagent with well known properties would have been *prima facie* obvious to the ordinary artisan at the time of the invention in the absence of an unexpected result. As regards the motivation to make the substitution recited above, the motivation to combine arises from the expectation that the prior art elements will perform their expected functions to achieve their expected results when combined for their common known purpose. Support for making this obviousness rejection comes from the M.P.E.P. at 2144.07 and 2144.09.

9. **Claim(s) 32 and 46** is/are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Perkin Elmer Cetus [GeneAmp™ DNA amplification kit (1988)] in view of Wallace et al. [US 5,639,611 (1997)] as applied against Claim 31 above and further in view of Mhlanga et al. [Methods 25 : 463-471 (2001).

Claim 32 is drawn to composition comprising a compound able to undergo specific base pairing interaction at a concentration of a least 10g/L and a pair of DNA probes, wherein said compound able to undergo specific base pairing interaction includes at least two groups suitable for hydrogen bonding, in an orientation, polarity and spacing compatible with the creation of attractive interaction with at least one of the-bases A, T, G, C, and U. In addition, the composition is to also comprise a pair of molecular beacon probes. Thus the composition is essentially identical to the composition of Claim 31 except the composition of Claim 32 must comprise a pair of DNA probes that are molecular beacon probes.

Perkin Elmer Cetus in view of Wallace et al. reasonably suggest a composition comprising all of limitations recited in Claim 32, except these references fail to teach a pair of DNA probes that are molecular beacon. However, as evidenced by at least Mhlanga et al., molecular beacon probes were well known at the time of the invention

as was their design and use in Real time PCR assays to detect SNPs in genes associated with particular diseases. Therefore absent an unexpected result it would have been *prima facie* obvious to the ordinary artisan at the time of the invention to modify the composition reasonably suggested by the combination of Perkin Elmer Cetus in view of Wallace et al. wherein molecular beacon probes specific for the normal allele and the mutant allele as disclosed by Wallace et al. are also included. The ordinary artisan would have been motivated to make this modification in order to enable the real time detection of the PCR assay taught by Wallace et al. Furthermore, the ordinary artisan would have been motivated to make this modification in order to eliminate the need for the agarose gel electrophoresis step of Wallace which utilizes the toxic compound ethidium bromide.

RESPONSE TO APPLICANT'S AMENDMENT/ ARGUMENTS

10. Applicant's arguments with respect to the claimed invention have been fully and carefully considered but are moot in view of the new ground(s) of rejection. The traversal as it relates to the 112, 1st paragraph rejections are deemed persuasive.

ALLOWABLE SUBJECT MATTER

11. Claim(s) 3-5, 27-28, 30, 33-35, 41-42, 44 and 47 are allowable over the prior art of record.

CLAIM OBJECTIONS

12. Claim(s) 10-13 is /are objected to as being dependent upon a rejected base claim, but would appear to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

CONCLUSION

13. Claim(s) 3-5, 2728, 30, 33-35, 41-42,44 and 47 is/are allowable while **Claim(s) 1-2, 6-26, 31-32, 36-40, 43, 45-46 and 48-50** is/are rejected and/or objected to for the reason(s) set forth above.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ethan Whisenant whose telephone number is (571) 272-0754. The examiner can normally be reached Monday-Friday from 8:30 am -5:30 pm EST or any time via voice mail. If repeated attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nguyen, can be reached at (571) 272-0731.

The Central Fax number for the USPTO is (571) 273-8300. Please note that the faxing of papers must conform with the Notice to Comply published in the Official Gazette, 1096 OG 30 (November 15, 1989).

/Ethan Whisenant/
Primary Examiner
Art Unit 1634